

The diagram illustrates the architecture of a 10 electronic camera. The system components and their interconnections are as follows:

- 11**: An optical lens at the front of the camera.
- 12**: An image-capturing element that receives light from the lens.
- 13**: An A/D (Analog-to-Digital) converter that digitizes the captured image data.
- 14**: A real-time processing unit that handles the digitized data.
- 14A**: A two-dimensional processing unit, which is a sub-component of the real-time processing unit.
- 14B**: An output destination setting circuit, also connected to the real-time processing unit.
- 15**: A main system bus that connects all major components.
- 16**: Image memory, connected to the bus for storing captured images.
- 17A**: A JPEG compression unit, which is part of a larger processing block **17B**.
- 17B**: A dashed-line enclosure containing the JPEG compression unit (17A) and a JPEG decompression unit.
- 18**: A thumbnail generating unit that creates smaller versions of images.
- 19**: An image plane size conversion unit that adjusts image dimensions.
- 19A**: An input source setting circuit that manages data sources for the size conversion unit.
- 20**: A buffer circuit containing a plurality of FIFOs (First-In-First-Out buffers) for temporary data storage.
- 21**: A secondary system bus that connects the buffer circuit to the output and storage components.
- 23**: A monitor display circuit that shows the processed images.
- 24**: A removable memory (memory card) for external storage.
- 25**: An MPU (Microprocessor Unit) that controls the camera's operations.
- 26**: System memory used for the camera's operating system and applications.
- 26A**: Non-volatile memory for permanent storage of settings and data.
- 28**: A photometric mechanism (for AE/AWB) that handles auto-exposure and white balance.
- 29**: An autofocus control mechanism that manages the camera's focus.

**FIG. 2** OPERATING TIMING FOR IMAGE-CAPTURING (COMPRESSION MODE)

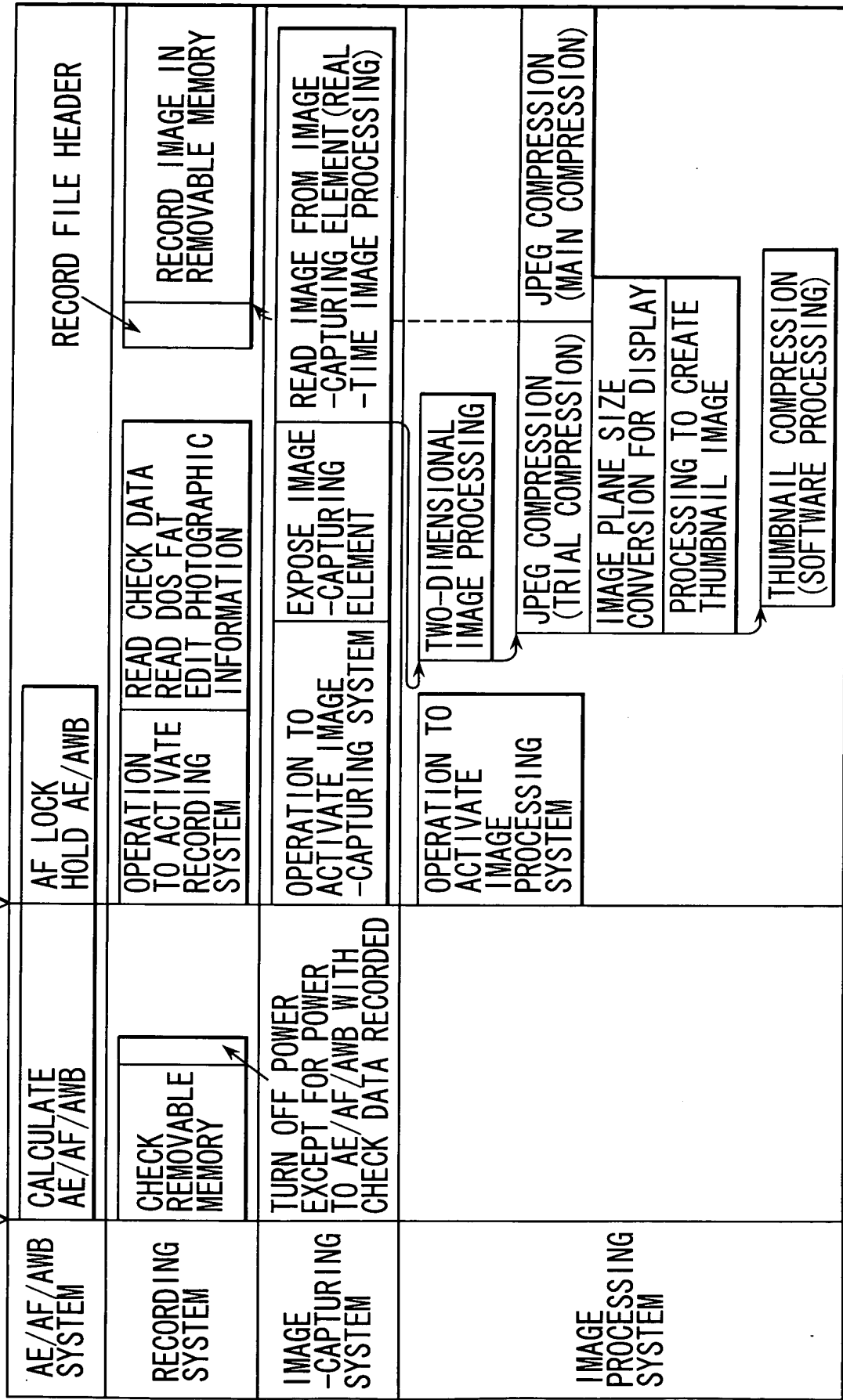
 SHUTTER RELEASE  
 PRESSED HALFWAY DOWN  
 SHUTTER RELEASE PRESSED  
 ALL THE WAY DOWN


FIG. 3A

PIXEL BLOCK REFERENCED  
 FOR COLOR INTERPOLATION

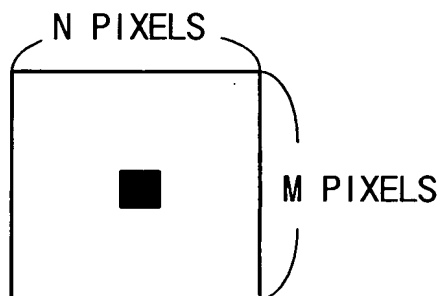


FIG. 3B

PIXEL BLOCK NECESSARY FOR  
 COMPRESSING IMAGE DATA FOR  
 SINGLE COLOR COMPONENT

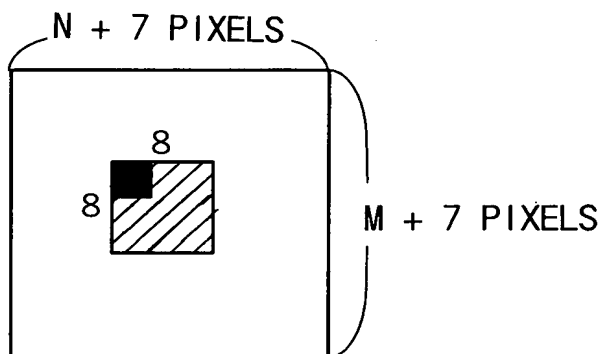
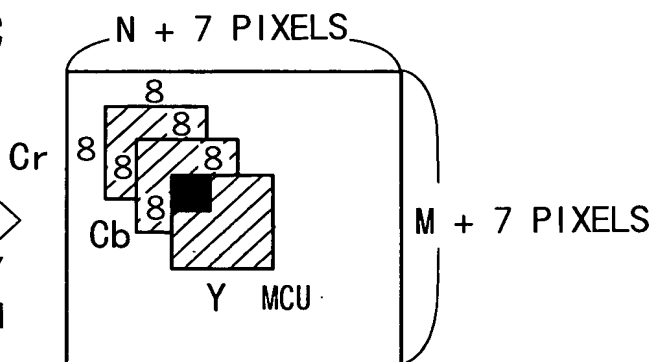


FIG. 3C

PIXEL BLOCK NECESSARY  
 FOR 4:4:4 COMPRESSION



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FIG. 3D

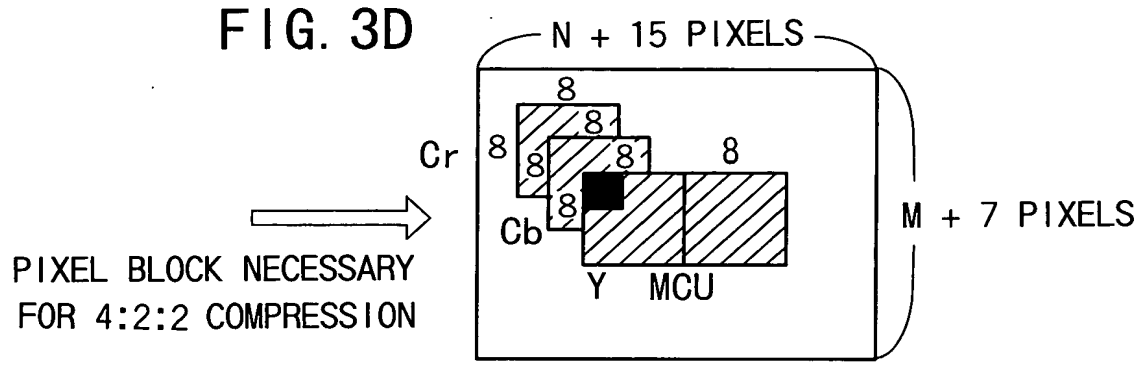
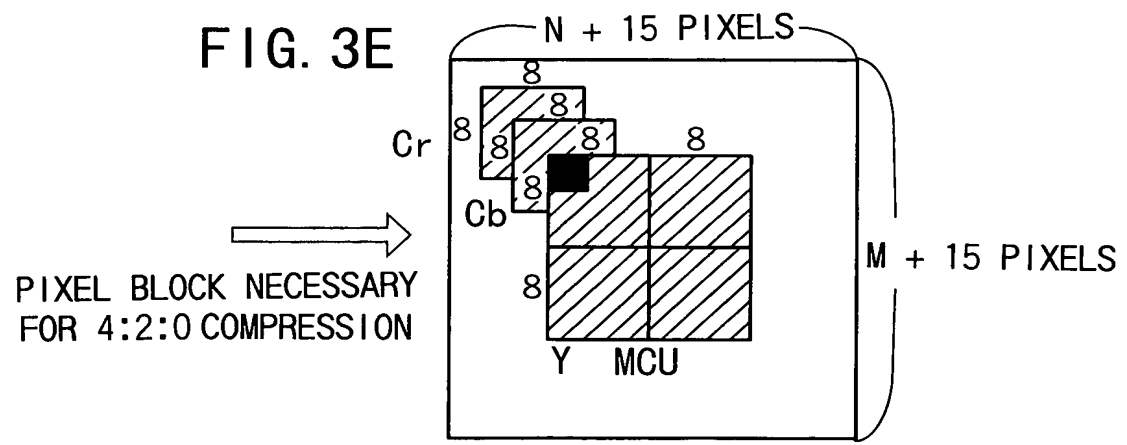
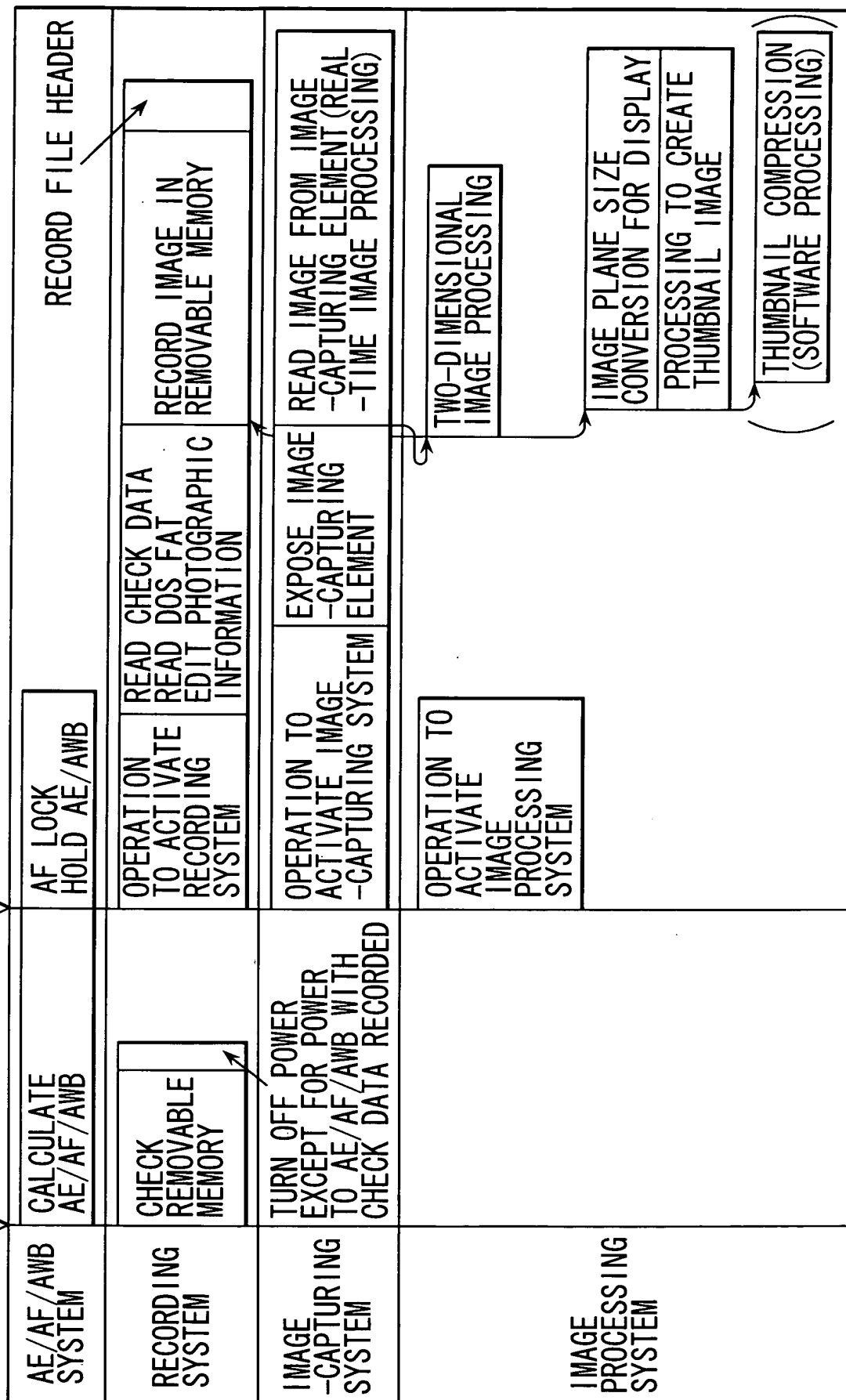


FIG. 3E

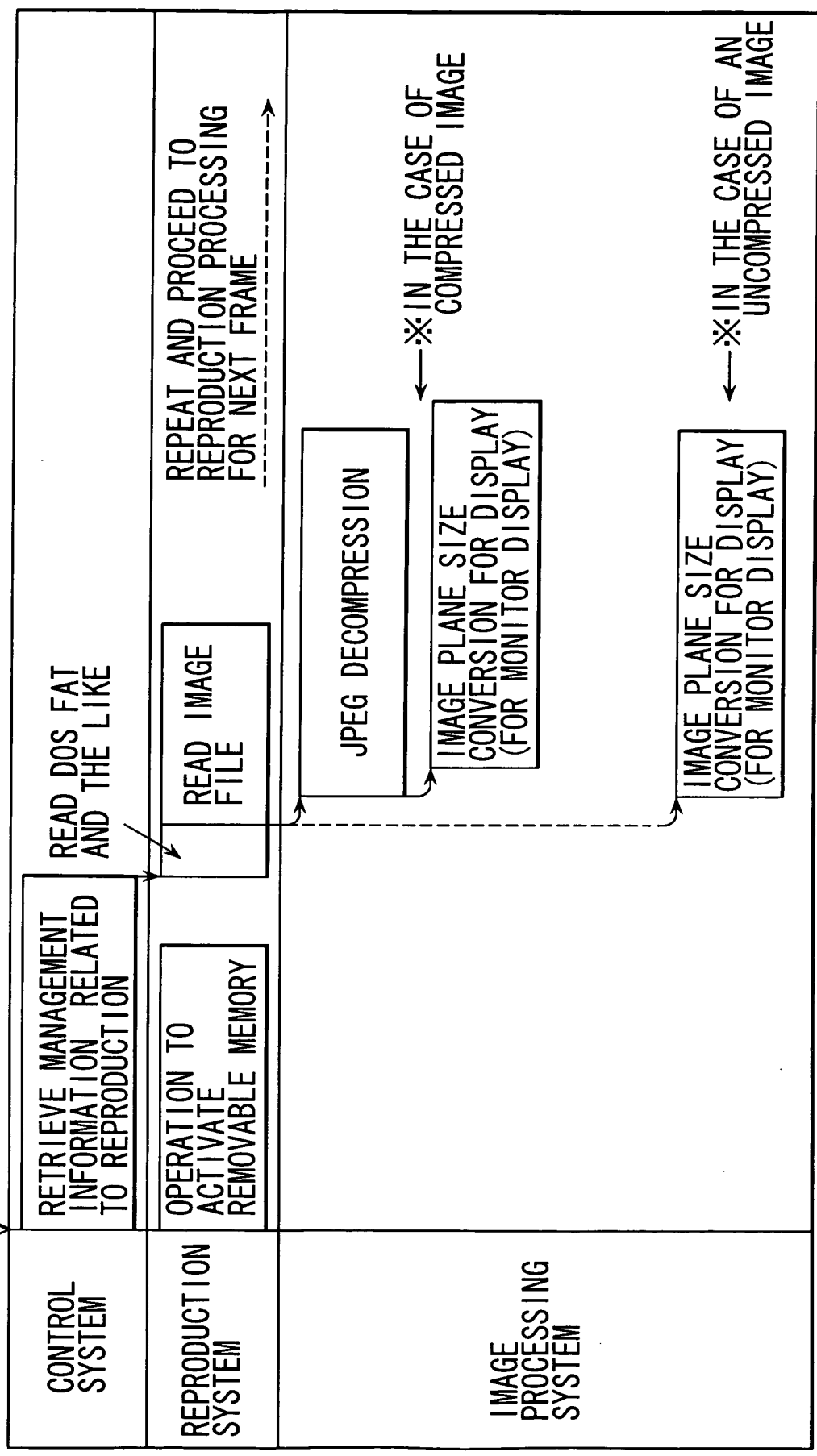


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SHUTTER RELEASE  
PRESSED HALFWAY DOWN



**FIG. 5**  
**OPERATING TIMING FOR REPRODUCTION**  
**REPRODUCTION MODE ON**



APPROVED  
 BY  
 DRAFTSMAN  
 FIG.  
 SUBCLASS

FIG. 6

PRIOR ART

